

AMENDMENTS

In the Specification

Please amend the paragraph at page 15, lines 18-23 as shown herein in marked-up form:

The determination of correspondence between a sub-network of the Boolean network and one of the predetermined design patterns may be done in any competent manner. In some embodiments of the method 510, the determination of correspondence is performed by performing graph pattern matching using conventional graph matching techniques. (Graph pattern matching is a well-known conventional art.) Preferably techniques for speeding up the graph pattern matching are used. ~~For example, preferably~~

Please amend the paragraph at page 15, line 19 through page 16, line 6 as shown herein in marked-up form:

~~In~~ For example, preferably, in one embodiment of the method 510, the predetermined design patterns are stored as sub-graph configurations having nodes and edges with certain characteristics. For example, the nodes may be characterized very simply by a triplet of information, as will be further discussed in a later section. Preferably, the predetermined design patterns are constrained in the maximum distance (e.g., 2 edges apart) between their alternative nodes and the (target) nodes that are replaced by the alternative nodes. Preferably, then, the search of the Boolean network, if a target node is given, only involves a sub-network around the target node that is commensurate in size as compared to the maximum size of the predetermined design patterns. Optionally, the sub-network around the target node is first “reduced” and then an alternative wire is sought for the target wire using the reduced Boolean sub-network for greater efficiency. Reduction of a network will be further discussed.